

# SEQUENCE LISTING

<110> Falco, S. Carl  
Cahoon, Rebecca E.  
Rafalski, J. Antoni

<120> Vitamin B Metabolism Proteins

<130> BB-1201

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<150> 60/096,342

<151> August 12, 1998

<160> 16

<170> Microsoft Office 97

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<212> DNA

<213> Zea mays

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<212> PRT

<213> Zea mays

<400> 2

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Lys Ser Ala Val Phe Pro Leu Gln Leu Leu Gly Phe Asp Val Asp Pro
          35             40             45

Ile Asn Ser Val Gln Phe Ser Asn His Thr Gly Tyr Pro Thr Phe Arg
          50             55             60
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Gly Gln Val Leu Asn Gly Lys Gln Leu Trp Asp Leu Ile Glu Gly Leu  
 65 70 75 80  
 Glu Glu Asn Gln Leu Leu His Tyr Thr His Leu Leu Thr Gly Tyr Ile  
 85 90 95  
 Gly Ser Val Ser Phe Leu Asp Thr Val Leu Gln Val Val Glu Lys Leu  
 100 105 110  
 Arg Ser Val Asn Pro Asp Leu Val Tyr Val Cys Asp Pro Val Leu Gly  
 115 120 125  
 Asp Glu Gly Lys Leu Tyr Val Pro Gln Glu Val Ile Ser Val Tyr Gln  
 130 135 140  
 Gln Lys Val Val Pro Val Ala Ser Met Leu Thr Pro Asn Gln Phe Glu  
 145 150 155 160  
 Val Glu Leu Leu Thr Gly Leu Arg Ile Thr Ser Glu Glu Asp Gly Leu  
 165 170 175  
 Thr Ala Cys Asn Thr Leu His Ser Ala Gly Pro Gln Lys Val Val Ile  
 180 185 190  
 Thr Ser Ala Leu Ile Glu Gly Lys Leu Leu Leu Ile Gly Ser His Lys  
 195 200 205  
 Lys Thr Glu Glu Gln Gln Pro Glu Gln Phe Lys Ile Glu Ile Pro Lys  
 210 215 220  
 Ile Pro Ala Tyr Phe Thr Gly Thr Gly Asp Leu Thr Thr Ala Leu Leu  
 225 230 235 240  
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 245 250 255  
 Leu Ala Val Ser Ser Leu Gln Ala Leu Leu Lys Arg Thr Val Glu Asp  
 260 265 270  
 Tyr Lys Met Ala Gly Phe Asp Pro Ser Thr Ser Ser Leu Glu Ile Arg  
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 Leu Leu Ile Gly Ser His Lys Lys Ala Lys Glu Gln Pro Pro Glu Gln  
 35 40 45  
 Phe Lys Ile Glu Ile Pro Lys Ile Pro Ala Tyr Phe Thr Gly Thr Gly  
 50 55 60  
 Asp Leu Thr Thr Ala Leu Leu Leu Gly Trp Ser Asn Lys Tyr Pro Asp  
 65 70 75 80  
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 85 90 95  
 Leu Arg Arg Thr Val Glu Asp Tyr Lys Arg Leu Gly Leu Thr Leu Gln  
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 Xaa Pro Lys Ile His Ala Ser Cys  
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Ser Ile Asn Ile  
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gaggaaaatc agctgcttca ttatacccat ttattaacag gttatatagg ctgagtttcc 300  
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tatgtttgtg acccagttct aggtgatgaa ggaaaactat atgttctca ggagctaata 420  
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Lys Ser Ala Val Phe Pro Leu Gln Leu Leu Gly Phe Asp Val Asp Pro  
35 40 45  
Ile Asn Ser Val Gln Phe Ser Asn His Thr Gly Tyr Pro Thr Phe Arg  
50 55 60  
Gly Ser Val Leu Asn Gly Lys Gln Leu Trp Glu Leu Ile Glu Gly Leu  
65 70 75 80  
Glu Glu Asn Gln Leu Leu His Tyr Thr His Leu Leu Thr Gly Tyr Ile  
85 90 95  
Gly Ser Val Ser Phe Leu Asp Thr Val Leu Gln Val Val Glu Lys Leu  
100 105 110  
Arg Ser Val Asn Pro Asp Leu Val Tyr Val Cys Asp Pro Val Leu Gly  
115 120 125

Asp Glu Gly Lys Leu Tyr Val Pro Gln Glu Leu Ile Ser Val Tyr Gln  
 130 135 140  
 Gln Lys Val Val Pro Val Ala Ser Met Leu Thr Pro Asn Gln Phe Glu  
 145 150 155 160  
 Val Glu Leu Leu Thr Gly Leu Arg Ile Thr Ser Glu Glu Asp Gly Leu  
 165 170 175  
 Thr Ala Cys Asn Thr Leu His Ser Ala Gly Pro Gln Lys Val Val Ile  
 180 185 190  
 Thr Ser Ala Leu Ile Glu Gly Lys Leu Leu Leu Ile Gly Ser His Lys  
 195 200 205  
 Lys Thr Glu Glu Gln Gln Pro Glu Gln Phe Lys Ile Glu Ile Pro Lys  
 210 215 220  
 Ile Pro Ala Tyr Phe Thr Gly Thr Gly Asp Leu Thr Thr Ala Leu Leu  
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 tcctttaccc tgggcacatc aatgtgtgtg agaattggaa aagctccatc tgttgaaatt 180  
 tcattcttca gggagaacta tatttccct gaacttcttg agagtcaagt gatgtctgat 240  
 ccatttgatc agttccttaa atggtttgat gaagcagtaa cagccggtcc cggctctgct 300  
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 tctctaagaa gaaattacat ctccctgaa cttctcgagn aacaggtgat gcctgatcca 240  
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 aatgcngccn gttncantgg aaggaataac ggcagtaaaa taaagtctgt canangtcca 480  
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Lys Ala His Asp Leu Ser Glu Asn Ser Asn Ala Ala Leu Leu Phe Tyr  
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 Trp Asn Glu Met Asn Arg Gln Val Arg Val Glu Gly Ser Val Gln Lys  
                     35                                    40                                    45  
 Val Ser Glu Glu Glu Ser Glu Lys Tyr Phe His Ser Arg Pro Arg Gly  
                     50                                    55                                    60  
 Ser Gln Leu Gly Ala Ile Val Ser Lys Gln Ser Thr Val Ile Ser Arg  
                     65                                    70                                    75                                    80  
 Glu Val Leu Gln Gln Ala Tyr Lys Glu Leu Glu Gln Lys Tyr Ser Asp  
                                     85                                    90                                    95  
 Gly Ser Phe Ile Pro Lys Pro Asp Tyr Trp Gly Gly Tyr Lys Leu Thr  
                     100                                    105                                    110  
 Pro Asn Leu Phe Glu Phe Trp Gln Gly Gln Gln Ser Arg Leu His Asp  
                     115                                    120                                    125  
 Arg Leu Gln Tyr Ser Gln Arg Glu Leu Gly Gly Ser Thr Glu Trp His  
                     130                                    135                                    140  
 Ile Gln Arg Leu Ser Pro  
 145                                    150